



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,082	04/25/2001	Martin Lakner	004501-545	5961
21839	7590	10/03/2003	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			NINO, ADOLFO	
		ART UNIT	PAPER NUMBER	2831
DATE MAILED: 10/03/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/841,082	<b>Applicant(s)</b> LAKNER ET AL.
	<b>Examiner</b> Adolfo Nino	<b>Art Unit</b> 2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 July 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 and 11 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7 and 11 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 April 2001 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

***Claim Objections***

Claim 7 is objected to because of the following informalities:

Claim 7, line 2, insert a comma between "reinforcement" and "glass".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Herd et al.

(IEEE transactions on applied superconductivity, vol. 7, no. 2, June 1997).

Regarding claim 1 (Once Amended), Herd et al. disclose a high-voltage insulation system (pg. 531, col. 1, lines 11-13) for electrical insulation of components whose operating temperature is below ambient temperature (pg. 531, col. 1, line 9) comprising a coolant (pg. 531, col. 1, line 38) and a solid material (pg. 531, col. 1, line 25) having a cured polymer matrix (pg. 531, col. 1, lines 32-33) and a base fabric (pg. 531, col. 1, line 31), wherein the base fabric comprises cellulose (line 31).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2831

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herd et al. in view of Applicants' Admitted Prior Art (AAPA).

Regarding claim 2 (Once Amended), Herd et al. disclose the high-voltage insulation system as claimed in claim 1, wherein the components contain high-temperature superconductor material (pg. 531, col. 1, lines 2-3), **except that** the coolant comprises helium gas instead of liquid nitrogen. AAPA teach that it is known to have a coolant being comprised of liquid nitrogen as set forth at paragraph [0003] of amended specification. Therefore, because these two coolants were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute liquid nitrogen for helium gas.

Regarding claim 3 (Once Amended), Herd et al. disclose the high-voltage insulation system (pg. 531, col. 1, lines 11-13) as claimed in claim 1, **except for** that in

order to make the components mechanically robust, the base fabric is in the form of pressboards. AAPA teach that it is known to have a base fabric in the form of pressboards as set forth at paragraph [0005] of amended specification. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the base fabric in the form of pressboards, as taught by AAPA in order to have a suitable rigid insulating material.

Regarding claim 4 (Once Amended), the modified Herd et al. disclose the high-voltage insulation system (pg. 531, col. 1, lines 11-13) as claimed in claim 3, wherein the base fabric comprises a laminate (pg. 531, col. 1, line 11-13), **except for** having at least two layers of pressboards, which are separated by at least one intermediate layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have at least three layers of pressboards (two outside layers with an intermediate layer), since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Regarding claim 5 (Once Amended), the modified Herd et al. disclose the high-voltage insulation system as claimed in claim 4, **except for** the intermediate layer being comprise of a fabric composed of cotton, nylon or polyethylene fibers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the intermediate layer being comprise of a fabric composed of cotton, nylon or polyethylene fibers, since it has been held to be within the general skill of a worker in

the art to select a known material on the basis of its suitability fro the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 6 (Once Amended), Herd et al. disclose the high-voltage insulation system as claimed in claim 1, **except for**, in order to grade electrical fields, carbon in the form of fibers or fabrics is being added to the base fabric or to the intermediate layer. AAPA teach that it is known to add a carbon in the form of fibers or fabrics to the base fabric as set forth at paragraph [0004] of amended specification. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a carbon in the form of fibers or fabrics to the base fabric, as taught by AAPA in order to have a suitable insulating material.

Regarding claim 7 (Twice Amended), Herd et al. disclose the high-voltage insulation system (pg. 531, col. 1, lines 11-19) as claimed in claim 1, **except for**, wherein, for mechanical reinforcement, glass fibers in the form of fibers or fabrics are added to the base fabric or to the intermediate layer. AAPA teach that it is known to have a base fabric in the form of pressboards as set forth at paragraph [0005] of amended specification. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add to the base fabric glass fibers in the form of fibers or fabrics, as taught by AAPA in order to have an insulating material that can withstand mechanical stresses.

Regarding claim 11 (New), the modified Herd et al. disclose the high-voltage insulation system as claimed in claim 4, wherein, in order to grade electrical fields,

carbon in the form of fibers or fabrics is added to the intermediate layer (paragraph [0004] of the amended specification).

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herd et al. in view of Lazor (US 3,710,293).

Regarding claim 3 (Once Amended), Herd et al. disclose the high-voltage insulation system (pg. 531, col. 1, lines 11-13) as claimed in claim 1, **except for** that in order to make the components mechanically robust, the base fabric is in the form of pressboards. Lazor teaches that it is known to have a base fabric in the form of pressboards as set forth at column 3, lines 40-41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the base fabric in the form of pressboards, as taught by Lazor in order to make the insulating material mechanically strong as set at col. 3, lines 45-46 of Lazor.

Regarding claim 4 (Once Amended), the modified Herd et al. disclose the high-voltage insulation system (pg. 531, col. 1, lines 11-13) as claimed in claim 3, wherein the base fabric comprises a laminate (pg. 531, col. 1, line 11-13) having at least two layers of pressboards (50, 52, 54 in fig. 3 of Lazor), which are separated by at least one intermediate layer (44, 48 in fig. 3 of Lazor; col. 3, lines 34-41 of Lazor).

Regarding claim 5 (Once Amended), the modified Herd et al. disclose the high-voltage insulation system as claimed in claim 4, wherein the intermediate layer (44, 48 in fig. 3 of Lazor) comprises a fabric composed of cotton, nylon or polyethylene fibers (col. 3, lines 37-39).

***Response to Arguments***

Applicant's arguments filed July 30, 2003 in Amendment C have been fully considered but they are not persuasive.

Regarding Applicants' argument that Herd does not disclose a high-voltage insulation system, as recited in claim 1, the Examiner refers to page 531 of Herd lines 15-19. Regarding tables 3 and 4, these are measurement results of the terminal voltages, ampere-turns, and coil heating for currents up to 15 amperes and for 20K, respectively.

Applicant's arguments with respect to claims 3-5 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (703) 305-1071. The examiner can normally be reached on M-F (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on (703) 308-3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AN

*Dean A. Reichard 9/22/03*  
DEAN A. REICHARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800